

REMARKS

I. Introduction

With the addition of new claim 11, claims 1 to 11 are pending in the present application. In view of the foregoing amendments and the following remarks, it is respectfully submitted that all of the presently pending claims are allowable, and reconsideration is respectfully requested.

Applicants note with appreciation the acknowledgment of the claim for foreign priority and the indication that all of the certified copies of the priority documents have been received.

Applicants thank the Examiner for considering the previously filed Information Disclosure Statement, PTO-1449 paper and cited references.

II. Objections to Claims 1 and 10

Claims 1 and 10 were objected to because of certain alleged informalities. While Applicants respectfully disagree with the merits of this objection, as indicated above, claims 1 and 10 have been amended to reflect the changes suggested by the Examiner. Accordingly, it is respectfully requested that the objections be withdrawn.

III. Rejections of Claims 1, 2 and 10 Under 35 U.S.C. § 102(b)

Claim 1 was rejected under 35 U.S.C. § 102(b) as anticipated by German Published Patent Application No. 196 52 807 ("Hoffmann et al. '807"), and claims 1, 2 and 10 were rejected under 35 U.S.C. § 102(b) as anticipated by International Published Patent Application No. WO 98/19346 ("Hoffmann et al. '346").

Claim 1 as presented recites a method for controlling a voltage applied to a piezoelectric element within a circuit for charging and discharging the piezoelectric element, in which a target voltage for the voltage applied to the piezoelectric element is modified, in view of at least one systematic error occurring during a first control procedure of the voltage applied to the piezoelectric element, to obtain a target voltage for a second and/or a further control of the voltage applied to the piezoelectric element.

The Office Action asserts on pages 3 through 5 that Hoffman et al. '807 and Hoffman et al. '346 each disclose all of the features of claim 1. In

particular, the Office Action asserts that Figures 2 , 3 and the Abstract of Hoffmann et al. '807, and Figures 2 , 3 and the Abstract of Hoffmann et al. '346, each disclose all of the features of claim 1.

Hoffmann et al. '807 purportedly concern controlling a piezoelectrically driven fuel injection valve of an internal combustion engine, in which the charge from a capacitor charged up to a predefined voltage is at least partially transferred to a control element over a defined charging period which is corrected depending on the previous charging time and voltage. In this regard, the charging period of the subsequent drive process is changed by a valued stored in a region of a characteristic field associated with the charging period and the charging voltage reached during the charging period. Accordingly, Hoffman et al. '807 merely disclose modifying a stipulated **charging time** across a control element in view of a measured voltage across the control element, or a modifying a stipulated **voltage** across the control element in view of the measured **charging time**, but not modifying a target **voltage** of the voltage applied to the piezoelectric element in view of at least one systematic error occurring during a first control procedure of the **voltage** applied to the piezoelectric element to obtain a target voltage for a second and/or further control of the voltage applied to the piezoelectric element as recited in claim 1.

Hoffmann et al. '346 purportedly concern a method and device for driving a capacitive actuator for a fuel injection valve of an internal combustion engine, in which a constant travel displacement of the capacitive actuator is achieved over a large operating temperature range by multiplying the current and voltage across the actuator during charging of the actuator to form a product which is integrated and compared with a predetermined setpoint value so that when the integration value reaches or exceeds the actual value, the processing of charging is stopped. Alternatively, the actuator is charged from a constant current source and only the voltage drop is integrated.

It is respectfully submitted that Hoffmann et al. '346 does not disclose modifying a target voltage of the voltage applied to a piezoelectric element in view of at least one systematic error occurring during a first control procedure of the voltage applied to the piezoelectric element to obtain a target voltage for a second and/or further control of the voltage applied to the piezoelectric element as recited in claim

1. Indeed, a target voltage or a second and/or further control of the voltage applied to the piezoelectric element is not even discussed in Hoffmann et al. '346.

To anticipate a claim, each and every element as set forth in the claim must be found in a single prior art reference. Verdegaal Bros. v. Union Oil Co. of Calif., 814 F.2d 628, 631, 2 U.S.P.Q.2d 1051, 1053 (Fed. Cir. 1987). Furthermore, "[t]he identical invention must be shown in as complete detail as is contained in the . . . claim." Richardson v. Suzuki Motor Co., 868 F.2d 1226, 1236, 9 U.S.P.Q.2d 1913, 1920 (Fed. Cir. 1989). That is, the prior art must describe the elements arranged as required by the claims. In re Bond, 910 F.2d 831, 15 U.S.P.Q.2d 1566 (Fed. Cir. 1990). Since the features of claim 1 are plainly not identically shown -- as they must for anticipation -- by Hoffmann et al. '807 or Hoffmann et al. '346, it is respectfully submitted that claim 1 is not anticipated and therefore allowable. Withdrawal of the rejection with respect to claim 1 is therefore respectfully requested.

As for claim 2, which depends from claim 1 and therefore includes all of its limitations, and claim 10, which recites features analogous to claim 1, it is respectfully submitted that these claims are allowable for at least the same reasons that claim 1 is allowable. Withdrawal of the rejection with respect to claims 2 and 10 is therefore respectfully requested.

IV. Allowable Subject Matter

Applicant notes with appreciation the indication of allowable subject matter contained in claims 3 to 9. In this regard, the Examiner will note that each of claims 3 to 9 has been rewritten herein in independent form to include all of the limitations of its respective base claim and any intervening claims. It is therefore respectfully submitted that claims 3 to 9 are in condition for immediate allowance.

V. New Claim 11

New independent claim 11 has been added herein. It is respectfully submitted that new claim 11 does not add any new matter and is fully supported by the present application, including the Specification. Since claim 11 recites features analogous to claim 1, it is respectfully submitted that claim 11 is allowable for at least the same reasons as claim 1.

VI. Conclusion


It is therefore respectfully submitted that all of the presently pending claims are allowable. All issues raised by the Examiner having been addressed, an early and favorable action on the merits is earnestly solicited.

Respectfully submitted,

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